

## CLAIMS

What is claimed is:

1. A method of operating an inkjet printing mechanism, the method comprising:  
5                    passing media through a printzone, said printzone including a support  
apparatus supporting said media thereat;  
                     during said passing, applying print imaging by application of ink from an  
ink dispensing element and onto a first surface of said media; and  
                     directing an airflow at said first surface, said airflow including a first  
10                   directional component away from said printzone and a second directional component onto  
said first surface, said second directional component urging said media against said  
support apparatus.

2. A method according to claim 1 wherein said airflow is directed from an  
15                   elongate vent.

3. A method according to claim 2 wherein a length dimension of said elongate  
vent is generally transverse to a media feed direction of said media passing through said  
printzone.  
20

4. A method according to claim 2 wherein said length dimension of said elongate  
vent is substantially coincident with a width of said printzone.

5. A method according to claim 1 wherein said airflow carries heat energy taken  
25                   from a heat source.

6. A method according to claim 5 wherein said heat source includes resistive  
elements carrying electrical current therethrough and having resistance thereto sufficient  
to produce elevated temperature in said airflow as said heat energy carried by said airflow  
30                   moving therepast.

7. A method according to claim 6 wherein said resistive elements include  
electronic control circuit components serving also to support operation of an inkjet  
printer.

8. A method according to claim 1 wherein said airflow is provided from an elongate vent having a length dimension less than a width of said printzone.

5 9. A method according to claim 1 wherein said airflow carries heat energy taken from a heat source otherwise producing waste heat energy.

10 10. A method according to claim 9 wherein said waste heat energy originates from electronic control circuit components.

11. A method according to claim 10 wherein said waste heat energy originates from motor components.

12. A method according to claim 1 wherein directing said airflow includes  
15 directing said airflow from a vent located on a carriage of an inkjet printer, and said applying comprises carrying said dispensing element.

13. A method according to claim 12 wherein said carrying comprises  
20 reciprocating said carriage laterally relative to a feed direction of said media passing through said printzone.

14. A method according to claim 1 wherein said second directional component is of sufficient magnitude to maintain said media against said support surface in said  
25 printzone.

15. A method according to claim 14 wherein said second directional component is directed away from said printzone.

16. A method according to claim 1 wherein said first directional component is  
30 substantially uniform across said media in a direction generally transverse to a feed direction of said media passing through said printzone.

17. A method according to claim 16 wherein said second directional component has greater magnitude at a laterally-outermost portion of said media relative to a laterally-central portion of said media.

5 18. A method according to claim 1 wherein said first directional component varies across said media in a direction generally transverse to a direction of said media passing through said printzone.

10 19. An ink assist air knife comprising:  
a heat source, said heat source including an inlet and an outlet, said heat source introducing heat energy into an airflow moving therethrough from said inlet to said outlet;  
an air transport fluidly coupled to said heat source and moving said airflow therethrough; and  
15 a conduit fluidly coupled to said air transport whereby said airflow as provided by said air transport passes through said conduit and exits a vent of said ink assist air knife as a heated airflow, with said vent being located relative to an inkjet printing mechanism having a printzone, said airflow as provided at said vent including directional components away from said printzone and onto media having print imaging  
20 thereon as applied by said inkjet printing mechanism.

25 20. An ink assist air knife according to claim 19 wherein said heat source comprises electrically conductive elements offering resistance to electrical current passing therethrough.

21. An ink assist air knife according to claim 20 wherein said electrically conductive elements include control components serving also to support operation of said inkjet printing mechanism.

30 22. An inkjet printing mechanism comprising:  
a printing system, including an ink dispensing element selectively ejecting ink droplets to produce imaging in a printzone thereof, said printing system further comprising a support apparatus partially bounding said printzone to support media therein relative to said ink dispensing element; and

an ink drying system including a heat source, an air transport, and an outlet vent, said air transport providing an airflow through said heat source, at said vent, and against said media with directional components including a first component directed away from said printzone and a second component directed onto said media.

5

23. An inkjet printing mechanism according to claim 22 wherein said airflow promotes drying of said print imaging and maintains said media within a selected range of distance relative to said ink dispensing element by maintaining said media against said support apparatus.

10

24. An inkjet printing mechanism according to claim 22 wherein said outlet vent comprises an elongate vent constricting said airflow to increase velocity thereof as said airflow is directed against said imaging.

15

25. An inkjet printing mechanism according to claim 24 wherein said outlet vent is stationary.

26. An inkjet printing mechanism according to claim 24 wherein said outlet vent is non-stationary.

20

27. An inkjet printing mechanism according to claim 22 further comprising a reciprocating carriage which transports said ink dispensing element across the printzone, and wherein said outlet vent is supported by said carriage.

25

28. An inkjet printing mechanism according to claim 27 wherein said outlet vent couples to said heat source, and further including a flexible conduit facilitating reciprocation of said carriage.

30

29. An inkjet printing mechanism according to claim 22 wherein said heat source comprises electric components offering resistance to electrical current passing therethrough.

30. An inkjet printing mechanism according to claim 29 wherein said electrically conductive components include electronic control components directing operation of said inkjet printing mechanism.

5           31. An ink assist air knife comprising:  
                    heat energy supplying means for generating heat energy;  
                    airflow producing means for producing an airflow, including means for  
collecting heat energy from said heat energy supplying means for incorporation into said  
airflow; and  
10                      airflow directing means for applying said airflow to print imaging with  
directional components onto said print imaging and away from a printzone whereat said  
print imaging is produced.

15           32. An ink assist air knife according to claim 31 wherein said heat energy  
supplying means comprises electric component means for offering resistance to electrical  
current passing therethrough.

20           33. An ink assist air knife according to claim 32 wherein said resistive elements  
include electronic control component means for supporting operation of an inkjet printing  
mechanism means for producing said print imaging.

25           34. An ink assist air knife according to claim 31 wherein said airflow directing  
means include a vent located in an inkjet printing mechanism having a printzone, said  
airflow being provided at said vent, said printzone defining a location at which said print  
imaging is formed.

30           35. An inkjet printing mechanism comprising:  
                    print imaging applying means for producing print imaging on media in a  
printzone; and  
                    airflow directing means for directing said airflow into said print imaging  
including airflow directional components away from said printzone and onto said media  
and for stabilizing said media in said printzone.

36. An inkjet printing mechanism according to claim 35 wherein said inkjet printer further comprises means for incorporating heat energy into said airflow.

5 37. An inkjet printing mechanism according to claim 35 wherein said airflow directing means includes an air knife vent.

38. An inkjet printing mechanism according to claim 37 wherein said air knife vent is stationary.

10 39. An inkjet printing mechanism according to claim 37 wherein said air knife vent is non-stationary.

40. An inkjet printing mechanism, comprising:

a print imaging device producing print imaging on media in a printzone;

15 and

an airflow directing device applying an airflow to said media including first directional components away from said printzone and second directional components toward said media to bear said media against a support apparatus of said printzone.

20 41. An inkjet printing mechanism according to claim 40 wherein said airflow directing device is an air knife having an elongate slot located proximate said media and proximate said printzone whereby said second directional components maintain said media against said support surface when in said printzone.